

Air pollution: Toxin-trapping trees can clean up streets

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The best trees for reducing air pollution from roads have been identified by a study which suggests some species are much better than others at trapping and diluting toxic particles.

THE TIMES

Evergreen oaks, pines and the common yew are among those which are potentially the most effective because they are relatively tolerant of pollution and have leaves all year of a type more likely to catch fine particles.

The government has pledged that all new streets will be lined with trees and the study authors hope it will inform the selection of species. They identified 12 traits that potentially make trees effective barriers against pollution, including small leaf size, high foliage density, long in-leaf periods and leaf hairiness.



The evergreen oak is among the best at reducing pollution

ALAMY

They also considered negative characteristics, such as how much pollen and volatile organic compounds (VOC) each species emits. Some types of oak, including cork oak, Spanish oak and holm oak, have relatively high VOC emissions which, when combined with sunlight and nitrogen oxide emissions from vehicles, can form ozone, which is an air pollutant at ground level.

Common yew, while effective at trapping pollution, is poisonous and the authors said it should not be planted near children's playgrounds.

The study also suggests where trees should be planted and at what height they should be maintained to maximise their effect on different types of street. The authors cautioned that the potential impacts needed to be confirmed by trials.

Prashant Kumar, who is professor of air quality and health at the University of Surrey, said: "The use of green infrastructure as physical barriers between ourselves and pollutants originating from our roads is one promising way we can protect ourselves from the devastating impact of air pollution. We hope that our detailed guide . . . is helpful to everyone looking to explore this option for combating pollution."

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